

REMARKS

Claim 1 has been amended to incorporate subject matter of Claim 3. Claim 3 has been amended to delete the subject matter incorporated into Claim 1. Since the subject matter of amended Claim 1 was already considered when Claim 3 was considered, Applicant submits that no issue requiring further consideration or search is raised, and thus, entry of this Amendment is respectfully requested. Claims 1-16 are pending.

Response to Claim Rejections Under § 103

I. Claims 1-12 and 15-16 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 5,959,039 to Yokoyama et al; and

II. Claims 3-16 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Yokoyama in view of U.S. Patent No. 6,376,593 to Sasaka et al.

Applicants respectfully traverse.

Yokoyama discloses a rubber composition comprising:

a high-molecular weight polymer component having a weight-average molecular weight of at least 30×10^4 and a bound styrene content of not greater than 30% by weight; and

a low-molecular weight polymer component having a weight-average molecular weight of from 0.2×10^4 to 8×10^4 and a bound styrene content of not greater than 30% by weight,

wherein each of the high-molecular weight polymer component and the low-molecular weight polymer component satisfies the following formula:

$$S + (V/2) < 25$$

wherein S represents an amount in % by weight of bound styrene and V represents a vinyl linkage content in % by weight.

Further, Yokoyama disclose at col. 4, lines 12-14 that “25 or more of the value of $S+(V/2)$ should be avoided because deterioration in the low-temperature flexibility occurs.” Thus, Yokoyama teaches away from using a copolymer (C) comprising 20-60 mass% of an aromatic vinyl compound and having a vinyl bond content in the diene compound portion of 10-80 mass%, as recited in present Claim 1, because when S is 20-60 and V is 10-80, $S+(V/2)$ is 25 or more.

Sasaka fails to make up for the deficiencies of Yokoyama discussed above

Thus, Yokoyama and Sasaka, either alone or in combination, fail to render obvious the present claims. Accordingly, withdrawal of the rejections is respectfully requested.

III. Claims 1-11 and 13-16 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 5,679,744 to Kawauzra et al; and

IV. Claims 4-12 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kawauzra in view of Yokoyama.

Applicants respectfully traverse.

Kawauzra discloses a rubber composition comprising (i) natural rubber and/or polyisoprene rubber; (ii) styrene-butadiene copolymer rubber and/or polybutadiene rubber; and (iii) an A-B type block copolymer.

In addition, Kawauzra discloses at Table V-2, that SBR having a weight average molecular weight of 320,000, a styrene content of 41 wt% and a vinyl content of 37 mol% is utilized. However, Kawauzra further discloses at Table V-2, that the block copolymer has a

weight average molecular weight of 500,000. See, Table V-4. Thus, Kawauzra fails to disclose or suggest a rubber composition comprising:

a copolymer (B) having a weight average molecular weight of more than 50,000 but not more than 300,000 and a vinyl bond content in the diene compound portion of 10-80 mass% and comprising 5-80 mass% of the aromatic vinyl compound; and

a copolymer (C) having a weight average molecular weight of not less than 300,000 and a vinyl bond content in the diene compound portion of 10-80 mass% and comprising 20-60 mass% of the aromatic vinyl compound, as presently claimed.

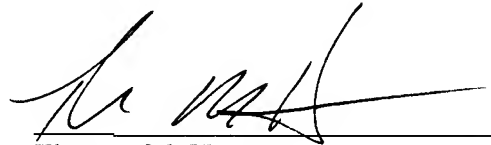
In addition, according to the present invention, the high storage modulus (high G') and the low loss factor (low $\tan \delta$) can be established without damaging the operability of the rubber composition. One of ordinary skill in the art would not expect this result from Kawauzra's disclosure.

Thus, Kawauzra and Yokoyama, either alone or in combination fail to render obvious the present claims. Accordingly, withdrawal of the rejections is respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'T. M. Hunter', is written over a horizontal line.

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